

- 6 -

REMARKS

Applicants appreciate the Examiner's thorough review and consideration of the subject application. The final Office Action of October 20, 2004 has been received and its contents carefully noted. Claims 1-15 are pending. Of these claims, claims 1-8 were previously presented, and claims 2-3 were indicated to contain allowable subject matter. Claims 9-15 are newly added by this Amendment, and independent claim 9 incorporates the features of claim 1 with the allowable subject matter of claim 2. Claims 3-6 were amended to change "storage conductor" to "storage electrode", in keeping with prior amendments made to claims 1 and 2. These amendments add no new matter and do not require further search because the subject matter of claims 9-15 was previously considered when claims 1-8 were examined. Consequently, the amendments place the claims in better condition for allowance and should be extended into the record. Reconsideration of and withdrawal of all pending rejections in view of the above amendments and following remarks is respectfully requested.

Allowable Subject Matter

Applicants appreciate the indication that claims 2-3 contain allowable subject matter. The allowable subject matter of claim 2 and the features of claim 1 have been rewritten as new independent claim 9, as suggested by the Examiner. Consequently, claim 9 is allowable over the cited prior art references. Claims 10-15 are also allowable based on their dependencies from allowable base claim 9.

35 U.S.C. § 103 Rejection

Claims 1, 4-6, and 8 are rejected under 35 U.S.C. §103(e) as being unpatentable over

- 7 -

U.S. Patent Application Publication 2003/0007108 to Hwang, et al. (“Hwang”) in view of U.S. Patent Application Publication 2002/0195609A1 to Yoshitake, et al. (“Yoshitake”), and further in view of U.S. Patent 6.554.407 to Ikeda, et al. (“Ikeda”). This rejection is respectfully traversed.

The Examiner admits, and Applicants agree, that neither Hwang nor Yoshitake, alone or in combination, disclose a storage electrode having a plurality of branches, wherein at most one of the branches has an isolated end as recited by claim 1. At issue is whether the disclosure of Ikeda cures the deficiencies of Hwang and Yoshitake. Applicants respectfully submit that it does not.

First, Ikeda discloses a plurality of linear electrodes (FIG. 2), some of which are broken into pieces by gaps (e.g., discontinuity portions) (Figures 10A-10D) positioned at random locations. These gaps are filled with an insulating material. Contrary to the Examiner’s argument, however, these bits and pieces of bifurcated electrodes are not branches. Instead, they are fragments separated from each other by an insulating material. Thus, the electrode “pieces” taught by Ikeda cannot be used to suggest the electrode branches having a maximum of one free end that Hwang and Yoshitake do not.

Secondly, in the alternative, even if Ikeda’s electrode pieces were considered to be branches as claimed, their isolated twin end construction would be contrary the claimed feature of “wherein at most one branch has an isolated end.” Thus, no matter how Ikeda is interpreted, it does not disclose the claimed feature of “wherein at most one of the branches has an isolated end”, as recited by claim 1.

Thirdly, the combination of Ikeda with Hwang and Yoshitake would not produce a device having all the elements recited in claim 1. Instead, a combination of Hwang, Yoshitake, and

- 8 -

Ikeda, assuming a motivation to combine disparate ink jet and LCD technology existed, would yield an electrode pattern as shown in FIG 3 of Yoshitake formed on a semiconductor substrate (Hwang and Yoshitake) or on a piezoelectric substrate (Ikeda). If formed on a semiconductor substrate, the electrode pattern would have no gaps or discontinuities because Ikeda teaches forming such openings only when an electrode is formed on a piezoelectric electric layer. If formed on a piezoelectric layer, the electrode pattern of Yoshitake would include one or more gaps corresponding to defective areas of the piezoelectric layer. However, given the configuration of the electrode pattern taught by Yoshitake, inclusion of even a single gap at any point along the pattern would result in at least two branches having isolated ends. Consequently, even if a motivation existed to combine these references as suggested by the Examiner, the resultant combination would not disclose the apparatus claimed in claims 1-8.

Lastly, the Examiner's position that a skilled artisan would have been motivated to combine the teachings of Hwang, Yoshitake, and Ikeda warrants reconsideration. As discussed above, it is apparent that the proposed combination would not produce an operable apparatus, and this lack of an expectation of success factors heavily in Applicants' favor. For example, nothing in the references themselves indicates that LCD's can be built and operated using the piezoelectric substrates suggested by Ikeda. Additionally, nothing in the cited references indicates that ink jet devices can operate using Yoshitake's electrode pattern, the geometry of which is particularly adapted for use in pixel areas of LCDs. Without an expectation of success, a skilled artisan would not be motivated to make the combination suggested by the Examiner.

For at least three reasons, Applicants respectfully submit that the Examiner's suggestion to combine Hwang, Yoshitake, and Ikeda lacks motivation. Similar reasoning applies to the suggested combination of Hwang and Yamakita in the rejection of dependent claim 7. Hwang

- 9 -


teaches a storage electrode having an expanded area. Yamakita teaches an electrode having a decreased area resulting a lack portion being formed therein. Conflicting teachings such as these have little or no expectation of success. Consequently, there would have been no motivation for a skilled artisan to combine them. For these reasons, the features of claim 1 are patentably distinguishable over the cited references, alone or in combination. Withdrawal of the rejection of claims 1, 4-6, and 8 is respectfully requested.

- 10 -

CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that all of the objections and rejections have been overcome, and that the claims are patentably distinct from the prior art of record and in condition for allowance. The Examiner is respectfully requested to pass the above application to issue, and to contact the undersigned at the telephone number listed below, if needed. Applicant hereby makes a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to **Deposit Account No. 23-1951** (McGuireWoods).

Respectfully submitted,



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